

**Agenda Item: 6**  
**Meeting Date: October 13, 2005**

## LEAD SCIENTIST REPORT

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**Description:** Recent Science Program Activities

**Recommended Action:** This is an information item only.

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### **Lead Scientist Recruitment Update**

Science Program continues to work with *CPS Human Resource Services* on the Lead Scientist recruitment effort. We have completed advertisement placement with selected publications and website organizations, created an informational website displaying the recruitment brochure (Attachment 1), and begun direct outreach and targeted solicitations to universities and qualified individuals. We expect to begin reviewing applications in November and begin interviewing candidates in early December or January. The information about candidates who pass this initial screening process will be reviewed by the Selection Committee, as described in the recruitment timeline presented at the September 8, 2005 Authority meeting. For additional information on candidate qualifications or to recommend qualified individuals for direct solicitation, please contact Stuart Satow at CPS ([SSatow@cps.ca.gov](mailto:SSatow@cps.ca.gov)).

### **Review Panels Update**

#### **1) Interagency Ecological Program's (IEP) Pelagic Organism Decline (POD)**

**Investigations:** Science Program staff is preparing contracts to form the technical review panel. The panel will include expertise in fisheries population biology, primary productivity and trophic energy transfer, systems integration, hydrology, introduced species, contaminants, and biostatistics. The panel will review and make recommendations on the investigation's 2005 results and proposed 2006 workplan. These recommendations will be compiled into a panel report and presented in a public workshop on November 14, 2005.

**2) Operation Criteria and Plan (OCAP) Biological Opinion:** At the request of the National Marine Fisheries Service (NMFS), the Science Program has organized an independent review of the scientific information used to support the 2004 Biological Opinion for the U.S. Bureau of Reclamation's (USBR) and Department of Water Resources' (DWR) OCAP for the Central Valley Project and State Water Project. A

public workshop is being convened October 12-13, 2005 at the University of California at Davis to provide the panel information on the key scientific information underlying the Biological Assessment and Biological Opinion – including modeling and underlying assumptions used to reach conclusions about project impacts (Attachment 2). The panel will release a draft report for agency and public review by mid-November, and the final report is expected by December 2005. For additional information on the review, including panel member information, please visit:

[http://science.calwater.ca.gov/workshop/workshop\\_ocap.shtml](http://science.calwater.ca.gov/workshop/workshop_ocap.shtml).

**3) Environmental Water Account (EWA):** Science Program staff and EWA agency biologists are planning a public workshop in December 2005 to review 2005 EWA water acquisitions and allocations. As outlined at the September 2005 Authority meeting, this workshop will be informal and consist of a series of presentations on 2005 EWA activities. To establish continuity with past reviews, four of the members of the EWA panel will attend the workshop; however, there will be no formal review panel report produced.

**4) CALSIM II Review:**

The CALFED Science Program and the California Water and Environmental Modeling Forum (CWEMF), in collaboration with the USBR; DWR; California Regional Water Quality Control Board, Central Valley Region (RWQCB-CVR); and the US Environmental Protection Agency (Water Quality Program), are cosponsoring a technical review of the recent improvements in the simulation of the San Joaquin River Valley in the CALSIM II model. The review panel is to provide an independent analysis and recommendations about the strengths and weaknesses of the new San Joaquin River Valley representations in CALSIM II, as part of a three-part public review process. During the first workshop, held on August 4, 2005, the panel gathered information and discussed the key underlying assumptions and data with agency staff and stakeholders. At the second workshop on September 30, 2005, the panel presented its draft findings and considered additional public input. The draft report is available on the Science Program website and public comments can still be provided for the panel to consider: [http://science.calwater.ca.gov/workshop/calsim\\_05.shtml](http://science.calwater.ca.gov/workshop/calsim_05.shtml). The review panel will present the final report at the last workshop on October 21, 2005.

**5) Delta Vision Technical Panel:** In response to requests by the California Legislature, the California Bay-Delta Authority and the Science Program is organizing a technical panel to consider the current scientific understanding of the Sacramento-San Joaquin River Delta and to prepare a report that will be used to help develop a long-term Delta vision. The panel will consist of scientists and economists with local knowledge and awareness of California water management. The panel will review, summarize and synthesize information developed by the CALFED Program's science boards, other pertinent literature, and input from other Delta science experts when needed. As the development of that vision proceeds, other more focused science

panels may be convened to address new questions that arise. The panel's report is scheduled for completion in December 2005.

### **Update on Status of Independent Science Boards' Organization and Structure**

As reported during the September 2005 Authority meeting, the current CALFED Science Boards [CALFED-wide Independent Science Board (ISB), the Ecosystem Restoration Program Science Board (ERPSB); Water Management Science Board (WMSB)] and their activities are suspended until a new contract for their support is in place. This hiatus has provided an opportunity to examine the organization and structure of the CALFED science boards and determine whether they might be improved to better meet the current needs of the CALFED Program and implementing agencies. Working with Science Program staff, CALFED Program managers and lead agency staff, the Lead Scientist has developed an approach that would streamline the current board structure, while maintaining the technical oversight and scientific integrity required to support CALFED management needs. The recommended approach envisions a smaller, more targeted ISB, made up of only 10 -12 members. The goal of the new board would be to concentrate on few key items from the Record of Decision charge: a) annual evaluation of the science agenda for the CALFED Program as a whole; b) begin review of performance measure information; and c) begin work on proposed National Research Council (NRC) review. The ERPSB and WMSP would be disbanded, but could be reconvened later depending on direction provided by the new Lead Scientist and outcomes of the current CALFED review processes. In the interim, specific technical review and oversight needs previously provided by the ERPSB or WMSB can be addressed by convening additional technical panels through newly established contract mechanisms. The Lead Scientist will continue discussions with Authority and agency staff and envisions bringing the proposed approach and a recommended list of new ISB members to the Authority for approval at the November Authority meeting.

### **Announcing 2005 CALFED Science Fellows**

The Science Program is proud to announce the 2005 CALFED Science Fellows (Attachment 3). Eight new Science Fellows were selected from over 45 proposals to receive a total of \$1,364,418 over the next three years. This is the second group to be selected as part of the seven-year program approved by the Authority in April 2004, and administered through an agreement with the California Sea Grant Program and the University of California at San Diego. The CALFED Science Fellows Program brings together young scientists, CALFED agency scientists and senior research mentors to collaboratively conduct research relevant to CALFED Bay-Delta Program on ecosystem management and water supply reliability. Each year, the program solicits research proposals from junior scientists (with the backing of their research mentors) to conduct analyses of existing data sets or research to address priority information needs identified in the CALFED Science Program Multi-Year Program Plans, science agendas, and proposal solicitations. The Science Fellows are competitively selected by a panel

selected by the CALFED Lead Scientist and/or Deputy Director of Science. Selected individuals work for three years at their research mentor's research institution on the approved project. For more information on the CALFED Science Fellows Program, including current and past fellows and projects, please visit the Science Program website at: <http://science.calwater.ca.gov/research/research.shtml>.

### **List of Attachments**

Attachment 1 — Lead Scientist Brochure  
Attachment 2 — OCAP Biological Opinion Review Public Notice  
Attachment 3 — 2005 CALFED Science Fellows

### **Contacts**

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## **The California Bay-Delta Authority Is Seeking An Astute And Dedicated Professional To Serve As Lead Scientist For The CALFED Bay-Delta Program**

### **CALIFORNIA BAY-DELTA AUTHORITY**

The California Bay-Delta Authority (CBDA) was established in 2003 by Senate Bill 1653 ([http://calwater.ca.gov/AboutCalfed/adobe\\_pdf/Booklet\\_DeltaAct.pdf](http://calwater.ca.gov/AboutCalfed/adobe_pdf/Booklet_DeltaAct.pdf)). The Authority is charged with implementing the programs, projects, and activities of the CALFED Bay-Delta Program, a collaborative effort of more than 20 State and Federal agencies created to improve water supplies in California and the health of the San Francisco Bay-Sacramento-San Joaquin River Delta Watershed. The CALFED agencies are investing in collaborative regional projects that provide local benefits while helping achieve overall Program objectives and commitments.

The Bay-Delta provides drinking water for 22 million people. It supports California's trillion-dollar economy, including its \$27 billion agricultural industry. It is the largest estuary on the west coast – home to 750 plant and animal species – and it supports 80 percent of the State's commercial salmon fisheries.

The CALFED Bay-Delta Program is a balanced, comprehensive approach to reduce conflicts over limited water supplies and to address the State's long-term water needs through its four resource management goals.



*The mission of the CALFED Bay-Delta Program is to develop and implement a long-term comprehensive plan that will restore ecological health and improve water management for beneficial uses of the Bay-Delta System.*

## **UNPRECEDENTED SCOPE AND VISION**

The CALFED Bay-Delta Program is the largest, most comprehensive water management program in the world. This Program includes the most complex and extensive ecosystem restoration project ever proposed. It is the most intensive water conservation effort ever tried. It is the most far-reaching effort to improve the drinking water quality of millions of Californians as well as an unprecedented commitment to watershed restoration. It is the most significant investment in storage and conveyance in decades.

## **SCIENCE PROGRAM**

The CALFED Science Program (<http://science.calwater.ca.gov>) was established in August 2000 by the California Bay-Delta Record of Decision (<http://calwater.ca.gov/Archives/GeneralArchive/RecordOfDecision2000.shtml>). The long-term goal of the Science Program is to establish a body of knowledge relevant to CALFED actions and their implications. That body of knowledge, both in perception and reality, must be unbiased, relevant, authoritative, integrated across program elements, and communicated to the scientific community, CALFED agency managers, stakeholders, and the public.

There are four broad objectives to the Science Program:

- Provide a comprehensive and integrated scientific context for CALFED activities
- Ensure continuous advancement of credible scientific information that will guide management decisions and water project operations
- Establish a framework to identify and articulate areas of scientific uncertainty relevant to key issues both before and after actions
- Develop strategies to reduce uncertainties and track performance and progress toward CALFED goals



*CALFED Science Program's mission is to integrate world-class science and peer review into every aspect of the CALFED Bay-Delta Program, and develop the best scientific information possible to guide decisions and evaluate actions that are critical to its success.*

## **LEAD SCIENTIST**

The Lead Scientist and the Science Program are charged with ensuring application of scientific principles and promoting peer review throughout CALFED to ensure high quality in program planning, implementation and evaluation. The Lead Scientist also nominates and establishes standing boards and independent review panels of experts as part of the independent science review of the entire CALFED Program. The Lead Scientist is appointed by and reports to the California Bay-Delta Authority board (<http://www.calwater.ca.gov/CBDA/NewCBDA.shtml>). The Lead Scientist also identifies, refines and implements the science agenda for the CALFED Program. This includes new science needs and a vision for assimilating the large amounts of scientific data and information generated by the CALFED Program into management decisions. An important part of the job includes developing, leading and sustaining dialogues and public discussions of technical issues among the stakeholder community, managers and directors of implementing agencies, and academic researchers.

### **Qualifications**

- Ph.D. or equivalent experience that includes a natural science background and extensive experience working with natural scientists, engineers, policy makers, agency managers, agency directors, politicians, and stakeholders from many perspectives
- Evidence of stature in the broad scientific community including invited contributions to workshops, conferences or panels, evidence of scientific leadership, membership in prestigious scientific organizations, awards of merit, etc.
- Experience advising top managers and policy makers and promoting constructive integration of interdisciplinary science in natural resource management, especially in areas relevant to water management and/or ecosystem restoration
- A strong record of publication in the peer-reviewed literature and other evidence of expertise relevant to the CALFED Program
- Evidence of the ability to work and communicate well with people from different professional backgrounds and weigh issues in a balanced manner when in an advisory capacity
- Evidence of the ability to work and think across disciplines and experience in working with and advising on complex issues that integrate multiple disciplines

In addition, the California Bay-Delta Authority has identified the following competencies and characteristics desired in a new Lead Scientist:

- Ability to establish and manage a broad interdisciplinary team
- Ability to relate to and respect other agencies and their roles and positions
- Ability to listen to public policy debate, discern what science issues need to be addressed, and seek information to answer these questions and address these issues
- Ability to assist CALFED in achieving the task of “reducing conflicts” through quality science
- Ability to deal with sociological issues, not just biological issues
- Ability to translate science to policy makers
- Effective project manager
- Effective leader who maintains the relevance of the Science Program by ensuring that the CALFED Program and its policies are based upon the latest research
- Ability to stand up to criticism (i.e. defend the integrity of science in decision-making)

## **THE SACRAMENTO AREA**

Sacramento's modern history began in 1839 when John Sutter settled at the confluence of the American and Sacramento Rivers. When the Mexican government granted 48,000 acres of land to Sutter, they did not realize they had given away a literal goldmine. Gold was discovered in 1848 just thirty miles east of Sacramento. The news of the discovery spread like wildfire and fortune hunters came by the thousands from all corners of the world to California. The discovery of gold led to the largest human migration in history. California became a state in 1850 and Sacramento its capital four years later. The area remains one of the fastest growing regions in the country. The metropolitan area consisting of Sacramento and parts of Yolo, Placer, El Dorado, Sutter, and Yuba Counties has a population of nearly 2 million, with 460,000 residing within the Sacramento city limits.



Sacramento has been called a snapshot of Wild West history in a modern, world-class city. Peacefully located in a leafy valley of scenic rivers and canopies of trees, today's Sacramento is a cosmopolitan convergence of tall, gleaming buildings, hearty Victorians, splendid restaurants and shops, and a vibrant arts scene. Among the annual events held in California's Capital include the Jazz Jubilee, California State Fair, California International Marathon, Summerfest, Festival de la Familia, Pacific Rim Streetfest, Mardi Gras, Juneteenth Celebration, Bridge to Bridge Waterfront Festival, Pan Pacific Masters Games, Gold Rush Days, Grape Escape, Salmon Festival, New Year's Eve Sky Concert, and Holiday of Lights.

Many factors contribute to the economic success of the region. A principal reason that Sacramento has retained its attractiveness is that it offers some of the lowest housing prices of major cities in the state. Many new residents have relocated from the San Francisco Bay Area and Southern California to take advantage of Sacramento's employment opportunities, low housing prices, reasonable cost of living, and competitive salaries. The current median home price in the area is \$351,000.

For sports fans, Sacramento boasts the very exciting *Sacramento Kings* NBA basketball team, the *Sacramento Monarchs* of the WNBA, and the Pacific Coast League champion *Sacramento River Cats* baseball team. Historic *Old Sacramento*, the *State Railroad Museum*, *Crocker Art Museum*, *Governor's Mansion*, *Sacramento Zoo*, *Sutter's Fort*, *Music Circus*, *Sacramento Convention Center*, *Golden State Museum* and the *State Capitol building* are other attractions located in the region.

## **COMPENSATION**

The U.S. Geological Survey will be the host agency and the position will be for a multiyear term as an assignment to the USGS from any public, university or non-profit institution. Benefits will be covered through the home institution. The individual will be working out of the CBDA offices in Sacramento, CA. The salary range will be at a federal grade of GS-15 (\$104,000 - \$135,000).

## APPLICATION AND SELECTION PROCEDURE

This position is open until filled. The first review of application materials will be **November 14, 2005**. To be considered for this challenging and rewarding career opportunity, send a letter of interest and curriculum vitae to:



Stuart Satow  
CPS Executive Search  
241 Lathrop Way  
Sacramento, CA 95815  
Tel: (916) 263-1401; Fax: (916) 561-7205  
E-mail: [resumes@cps.ca.gov](mailto:resumes@cps.ca.gov)  
CBDA website: [www.calwater.ca.gov](http://www.calwater.ca.gov)



## **The CALFED Science Program presents a workshop as part of:**

### **A review of the science underlying the 2004 NOAA Fisheries Biological Opinion on the long-term operation of the Central Valley Project and State Water Project - OCAP**

**October 12 – 08:30 to 5  
October 13 – 08:00 to 3  
Putah Creek Lodge  
University of California, Davis  
Davis, CA**

#### **Background:**

Operation of the federal and state water projects is conditioned in part by the need to eliminate, minimize or mitigate harm to listed fish species including spring and winter Chinook salmon and steelhead rainbow trout. The federal Endangered Species Act requires that projects that may jeopardize the continued existence of a listed species consult with the responsible federal agency. In this case, the US Bureau of Reclamation and the California Department of Water Resources respectively operate the Central Valley Project and State Water Project through a Coordinated Operations Agreement. Acting as lead agency, the USBR entered into a Section 7 consultation with NOAA Fisheries to assess the impacts of proposed changes in project operations on listed anadromous salmonids. In October 2004 NOAA Fisheries issued a biological opinion which concluded, among other things, that project operation as described in the biological assessment would not jeopardize the continued existence of the listed salmonid species.

On July 29, 2005 NOAA Fisheries requested that the CALFED Science Program review the science underlying its biological opinion. On August 24, 2005, CALFED Science Program agreed to conduct such a review, and has since established an independent panel to conduct the review. This workshop is an integral component of the review process. The Review Panel members have received and are reviewing the assessment and opinion and supporting documents. For additional information, including the NOAA Fisheries request, the CALFED Science Program response, and information on review panel members are posted at [http://science.calwater.ca.gov/workshop/workshop\\_ocap.shtml](http://science.calwater.ca.gov/workshop/workshop_ocap.shtml).

#### **Workshop Objective:**

The primary objective of this workshop is to provide an opportunity for the review panel members to hear directly from the agency staff (and consultants as appropriate) who worked directly on the biological assessment (BA) and biological opinion (BO) and to clarify any technical issues associated with the data, the analyses or the assumptions underlying the analyses. A secondary objective is to allow time for the panel to meet in executive session to organize its approach to the charge. A third objective is to provide stakeholders and other public attendees a limited opportunity to point out scientific data that may have been overlooked in the assessment and opinion, or different approaches to analyzing the data.

It must be made clear that this is an information gathering workshop, with the information dealing with the BA and BO and supporting documents. The panel will not be providing a summary of their findings, conclusions or recommendations at this workshop. Their findings will be documented in a report to the CALFED Lead Scientist due December 15, 2005. The panel is expected to present its findings orally at a public meeting expected to be held in the Sacramento Area in January 2005. The final report, and the announcement of the January public meeting, will be posted on the CALFED Science Program website (<http://science.calwater.ca.gov>).

**Format:**

The overall workshop format is intended to foster communications among the speakers (and accompanying staff) and the review panel.

- There will be several presentations by agency staff and other technical representatives dealing with important components of the biological assessment and opinion. Each presentation will include sufficient time for responses to questions from the panel.
- During the workshop questions or comments will not be accepted from public attendees.
- Attendees from the public wishing to make brief comments on data or analyses the agencies may have overlooked in preparing the assessment or opinion will be asked to make their requests in writing during the first day of the workshop. Only those speakers directly addressing science issues will be given the opportunity to speak to the panel during the last hour of the workshop on October 13.

**For More Information:**

- Due to relatively limited space at the workshop site, pre registration is required. There is no charge for the workshop. For more information and to register, contact Randy Brown at [brown.randall@comcast.net](mailto:brown.randall@comcast.net) or at 916.961.5449.
- A draft agenda and background material has been posted to the Science Program website: [http://science.calwater.ca.gov/workshop/workshop\\_ocap.shtml](http://science.calwater.ca.gov/workshop/workshop_ocap.shtml).
- Workshop notes and PowerPoint presentations will be posted on the Science Program website: [http://science.calwater.ca.gov/workshop/workshop\\_ocap.shtml](http://science.calwater.ca.gov/workshop/workshop_ocap.shtml) by November 1, 2005
- If you need reasonable accommodation due to a disability, please contact Colleen Kirtlan, California Bay-Delta Program at (916) 445-5511, TDD (800) 735-2929.

**2005 CALFED Science Fellows**

Name	Project Title	Mentor/Organization	Type of Award	Award/Term
Annjanette Dodd	Development of a Simulation Model of Juvenile Salmon Movement in the Sacramento-San Joaquin Delta	Ronald Lamberson HSU	Postdoctoral	\$200,125/ 3 years
John Harrison	Modeling Nutrient and Organic C Loads and Sources in Central Valley Watersheds: Taking Existing Monitoring Data to the Next Stage	Randy Dahlgren Rutgers	Postdoctoral	\$228,750/ 3 years
James Hobbs	The Application of Otolith Geochemistry to Determine Stock Structure, Survival and the Relative Impact of Water Exports on the "Threatened" Delta Smelt	Lynn Ingram William Bennett UCD	Postdoctoral	\$228,750/ 3 years
John Stella	Restoring Non-Equilibrium Riparian Communities in Disturbance-Altered Ecosystems: Implications for River Management and Climate Change	John Battles UCB	Postdoctoral	\$228,750/ 3 years
Margaret Andrew	Determining the Factors Controlling Site Invasibility to <i>Lepidium latifolium</i>	Susan Ustin UCD	Predoctoral	\$111,750/ 3 years
Walter Heady	Effects of Water Temperature, Streamflow and Flood Availability on the Growth, Survival and Movement of Central Valley Juvenile Steelhead ( <i>Oncorhynchus mykiss</i> ) with Implications for Water Management	Mark Carr UCSC	Predoctoral	\$129,375/ 3 years
Suzanne Langridge	Addressing Stakeholder Concerns: Pests and Pest Control in the Sacramento River Conservation Area	Dan Doak UCSC	Predoctoral	\$129,239/ 3 years
Toby Minear	Long-term Geomorphic Effects of Dams on Rivers in the Central Valley of California: A Comprehensive and Comparative Approach	Matt Kondolf UCB	Predoctoral	\$107,679/ 3 years